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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/586,349 | 04/10/2007 | Ayala Barak | BARAK7 | 2789 |
| 1444 | 7590 | 10/23/2009 | | |
| BROWDY AND NEIMARK, P.L.L.C. | | | EXAMINER | |
| 624 NINTH STREET, NW | | | | RICCI, CRAIG D |
| SUITE 300 | | | ART UNIT | PAPER NUMBER |
| WASHINGTON, DC 20001-5303 | | | | 1628 |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | |
|------------------------------|------------------------|---------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/586,349 | BARAK, AYALA |
| | Examiner | Art Unit |
| | CRAIG RICCI | 1628 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 14 July 2006.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 95-129 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) _____ is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) 95-129 are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) Notice of Informal Patent Application

6) Other: _____.

DETAILED ACTION

As provided in 37 CFR 1.475(a), a national stage application shall relate to one invention only or to a group of inventions so linked as to form a single general inventive concept (“requirement of unity of invention”). Where a group of inventions is claimed in a national stage application, the requirement of unity of invention shall be fulfilled only when there is a technical relationship among those inventions involving one or more of the same or corresponding special technical features. The expression “special technical features” shall mean those technical features that define a contribution which each of the claimed inventions, considered as a whole, makes over the prior art.

The determination whether a group of inventions is so linked as to form a single general inventive concept shall be made without regard to whether the inventions are claimed in separate claims or as alternatives within a single claim. See 37 CFR 1.475(e).

As provided in 37 CFR 1.475(b), a national stage application containing claims to different categories of invention will be considered to have unity of invention if the claims are drawn only to one of the following combinations of categories:

- (1) A product and a process specially adapted for the manufacture of said product; or
- (2) A product and process of use of said product; or
- (3) A product, a process specially adapted for the manufacture of the said product, and a use of the said product; or
- (4) A process and an apparatus or means specifically designed for carrying out the said process; or

(5) A product, a process specially adapted for the manufacture of the said product, and an apparatus or means specifically designed for carrying out the said process.

Otherwise, unity of invention might not be present. See 37 CFR 1.475(c).

Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) **125-128**, drawn to an apparatus for applying a biocide to a medium

Group II, claim(s) **95-124 and 129**, drawn to a method for controlling microbial or biofilm growth in a medium.

2. As set forth in Rule 13.1 of the Patent Cooperation Treaty (PCT), "the international application shall relate to one invention only or to a group of inventions so linked as to form a single general inventive concept." Moreover, as stated in PCT Rule 13.2, "where a group of inventions is claimed in one and the same international application, the requirement of unity of invention referred to in Rule 13.1 shall be fulfilled only when there is a technical relationship among those inventions involving one or more of the same or corresponding special technical features." Furthermore, Rule 13.2 defines "special technical features" as "those technical features that define a contribution which each of the claimed inventions, considered as a whole, makes over the prior art."

3. The inventions listed as **Groups I-II** do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The technical feature of **Group II** is method for controlling microbial or biofilm growth in a medium. The method of claim 95 does not present a contribution over the prior art. As disclosed in *Barak* (US 6,132,628) the technical feature of instant claim 95 is not novel. Specifically, *Barak* teaches a method for treating a liquid to inhibit the growth of living organisms by adding an active biocidal ingredient formed by mixing an oxidant and an amine source (Abstract) which encompasses the mixture of instant claim 95. As such, **Group I** does not share a special technical feature with the instant claims of **Group II**. Therefore, the claims are not so linked within the meaning of PCT Rule 13.2 so as to form a single inventive concept, and unity between **Groups I-II** is broken.

The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder. All claims directed to a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102,

103 and 112. Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b). Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.** Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

Election of Species

4. This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

If Group I is elected, the following species election IS required:

- a) A single apparatus for applying a biocide to a medium by defining for EACH of the following (i)-(ii):
 - (i) Specify whether the nitrogen-containing compound reservoir contains (i-a) a nitrogen-containing compound or (i-b) a mixture of nitrogen-containing compounds AND, furthermore, elect with specificity the nitrogen-containing compound(s) by defining each of Y, x, Z, n, R³, R⁴, Q and any additional variables as required for the particular species. In doing so,

Applicant is reminded that a species for example is methyl, NOT alkyl.

Upon Applicant's election of species, the result must identify a single chemical species for each nitrogen-containing compound.

- (ii) Specify whether the source of hypochlorite oxidant dilution (ii-a) DOES comprise or (ii-b) does NOT comprise a hypochlorite-containing reservoir and a diluter as recited by instant claim 127 and, if it DOES comprise said reservoir, specify whether the diluter and said mixing chamber (ii-c) ARE a single conduit or (ii-d) are NOT a single conduit as recited by instant claim 128;

If Group II is elected, the following species election IS required:

- b) A single method for controlling microbial or biofilm growth in a medium by defining for EACH of the following (i)-(ii):
 - (i) Elect a single nitrogen-containing compound by defining each of Y, x, Z, n, R¹-R⁴, Q, A and any additional variables as required for the particular species. In doing so, Applicant is reminded that a species for example is methyl, NOT alkyl. Upon Applicant's election of species, the result must identify a single chemical species for each nitrogen-containing compound;
 - (ii) Elect a single hypochlorite oxidant species;
 - (iii) Specify whether the mixing (iii-a) DOES take place in a mixing chamber according to instant claim 101 and 105, or (iii-b) does NOT take place in mixing chamber according to instant claim 101 and 105;

- (iv) Specify whether the solution of hypochlorite oxidant (iv-a) IS prepared in situ or (iv-b) is NOT prepared in situ as recited by instant claim 107;
- (v) Specify whether the nitrogen-containing compound (v-a) IS diluted prior to mixing with the hypochlorite oxidant or (v-b) is NOT diluted prior to mixing as recited by instant claim 108;
- (vi) Specify the medium in which microbial or biofilm growth is controlled as recited by instant claims 109-117;
- (vii) Specify whether the medium (vii-a) DOES contain or (vii-b) does NOT contain strong reducing agents as recited by instant claim 118;
- (viii) Specify whether the medium (viii-a) DOES have a high reducing capacity or (viii-b) does NOT have a high reducing capacity as recited by instant claim 119;
- (ix) Specify the ORP in millivolts of the medium as recited by instant claim 120;
- (x) Specify whether the hypochlorite oxidant and nitrogen-containing compound (x-a) ARE mixed or (x-b) are NOT mixed in the absence of added bromide and whether the medium (x-c) IS substantially free of added bromide during application or (x-d) is NOT substantially free of added bromide during application;

Applicant is required, in reply to this action, to elect a single compound species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently

added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. Currently, the following claim(s) are generic: claim 125 as to Group I; and claims 95 and 122-124 as to Group II

6. The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: even though the species require the technical feature of a mixture of an amine compound and an oxidant as a biocidal, this technical feature is not a **special** technical feature as it does not make a contribution of the prior art in view of *Barak* (US 6,132,628).

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

The election of the species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the election of species requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to

petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected species.

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the species unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other species.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CRAIG RICCI whose telephone number is (571) 270-5864. The examiner can normally be reached on Monday through Thursday, and every other Friday, 7:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brandon Fetterolf can be reached on (571) 272-2919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/CRAIG RICCI/
Examiner, Art Unit 1628

/Brandon J Fetterolf/
Primary Examiner, Art Unit 1642